

REMARKS/ARGUMENTS

Applicant would like to thank the Examiner for the careful consideration given the present application. The application has been carefully reviewed in light of the Office Action, and amended as necessary to more clearly and particularly describe the subject matter that Applicant regards as the invention. Review of the subject application in view of the present remarks is respectfully requested.

By the present amendment, claims 1, 6, 7, 10, and 15-18 have been amended. Claim 19 has been added. Claim 13 has been cancelled. No new matter is entered. As such, it is now respectfully submitted that each of the claims is in condition for allowance.

The Office action objected to the specification under 35 U.S.C. § 132(a) as allegedly introducing new matter into the disclosure. Specifically, the term “ring-shaped end” in paragraph [0012] was cited. As such, applicant has deleted the term “ring-shaped”, and paragraph [0012] now states “fixed end” and “opposite end.” Support for the amendment can be found at least in paragraph [0005] on page 4, lines 18-22 as originally filed, which states that “an opposite end of the second fixing means that is arranged to be opposed to a fixed end of the second power transmission means which is formed in a ring-shape due to fixing at the fixed end to the first fixing means.” Accordingly, withdrawal of the objection is respectfully requested.

Claim 15 was objected to for containing a typographical error. As such, the term “faster” has been replaced by “fastener.” Accordingly, withdrawal of the objection to claim 15 is respectfully requested.

Claims 1-6, 12-15, and 17 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The Office action alleged that claim 1 contained new matter, specifically citing the term “ring shaped.” Applicant has amended claim 1, which now states “fixed end” and “opposite end.” Support for the amendment can be found at least in paragraph [0005], as cited above.

The Office action further alleged that claim 13 contained new matter, specifically citing the term “non-rectangular cross-section.” Claim 13 has been cancelled. As such, the rejection is believed to be moot.

It is believed that applicant has addressed the concerns raised in the Office action. Accordingly, withdrawal of the rejection of claims 1-6, 12-15, and 17 is respectfully requested.

Claim 1

Independent claim 1 was rejected under 35 U.S.C. § 103(a) to Okawa (U.S. 2002/0062080). Claim 1 has been amended to state, “wherein an axis direction of the drive device and an axis direction of the rotation shaft of the ultrasonic transducer unit are configured to intersect.” Support for the amendment can be found at least in paragraph [0014] as originally filed. Okawa fails to teach such structure.

In distinction, Okawa teaches a pair of pulleys – a driven pulley 5 and a drive pulley 9. As shown in Figs. 1A and 1B, the pulleys 5, 9 are arranged such that an axis of the driven pulley 5 is parallel to an axis of the drive pulley 9. As stated in Okawa, “the drive shaft 7 is rotatably supported by the outer case 11 in spaced-apart and parallel relationship with the driven shaft 2 in the predetermined direction.” See paragraph

[0049]. Moreover, as shown in Fig. 2, the axes of the pulleys 5, 9 are oriented with parallel axes such that an idler roller 21 can impart tension on a drive belt 10. Okawa therefore fails to teach “wherein an axis direction of the drive device and an axis direction of the rotation shaft of the ultrasonic transducer unit are configured to intersect” as stated in claim 1. Accordingly, at least for these reasons, claim 1 is believed to be in condition for allowance. Applicant respectfully requests withdrawal of the corresponding rejection of claim 1.

Claims 2-6, 12-15, and 17 depend from independent claim 1 that is believed to be in condition for allowance as set forth above. Accordingly, applicant respectfully requests withdrawal of the corresponding rejection of claims 2-6, 12-15 and 17 as depending directly or indirectly from allowable claim 1.

Claim 7

Independent claim 7 was rejected under 35 U.S.C. § 103(a) to Okawa. Claim 7 has been amended to state, “wherein the at least one slidable intermediate pulley is configured to slide in a direction towards and away from the drive pulley and in a direction parallel to the rotation shaft of the ultrasonic transducer unit.” Okawa fails to teach such structure.

The Office action concedes that Okawa fails to teach the above cited structure. However, the Office action alleges that it would have been obvious for one of ordinary skill in the art to modify the structure of Okawa by moving the attached swingable arm positioned “in any adequate direction” for removing slack. Applicant respectfully submits that the proposed modification would render Okawa unsatisfactory for its

intended purpose.

As stated in MPEP § 2143.03(VI), "[a] prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention." Accordingly, if the proposed modification would render the prior art being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. See MPEP § 2143.03(V).

Here, Okawa clearly teaches a flat, planar drive belt 10, 31 (shown in Fig. 4A) that is contacted by an idler roller 21 (shown in Fig. 2). The idler roller 21 is held in pressing contact with the flat, planar surface of the drive belt 10. As such, the idler roller imparts tension by moving left and right, in a direction perpendicular to a center of the driven pulley 5. In fact, Okawa explicitly states that "the idler roller 21 is rollable or slidable with respect to the outer surface of the drive belt 10." See paragraph [0059]. Assuming, *arguendo*, that the idler roller could move in a direction parallel to the center of the driven pulley 5, such a modification would cause the drive belt 10 to fall off one or both pulleys 5, 9 and impair the movement of the drive belt 10. Therefore, such a modification would not only render Okawa unsatisfactory for the intended purpose, but would further teach away from the disclosure in Okawa. Therefore, applicant respectfully requests withdrawal of the corresponding rejection of claim 7.

Independent claim 7 incorporates features from claim 16, as presented in the amendment dated February 7, 2011. The Office action rejected claim 16 under 35 U.S.C. § 103(a) to Okawa in view of Jinno (U.S. 2004/0266574). Neither of the references, either alone, or in combination, teach or describe the above cited structure of claim 7.

The Office action concedes on page 7 that Okawa fails to teach "a pulley movable

parallel to another rotation shaft such as the transducer unit.” However, the Office action cites Jinno as allegedly teaching this structure, citing Fig. 18 of Jinno and stating that it teaches “a pulley system wherein one pulley is movable in a direction parallel to the rotation shaft of another pulley.” Applicant respectfully disagrees. First, none of the three pulleys cited in Fig. 18 is movable, as alleged in the Office action. Rather, the middle pulley (idle pulley 51a) is static, and is merely provided to assist in the twisting of the wire 52. Moreover, even if the idle pulley 51a did move (i.e., towards and away from one of the pulleys 50, 51), the idle pulley 51a would not move “in a direction parallel to the rotation shaft” as stated in claim 7.” Instead, movement of the idle pulley 51a would be in a direction perpendicular to both shafts of the pulleys 50, 51. Therefore, at least for these reasons, neither Okawa nor Jinno, either alone or in combination, teach the above cited structure of claim 7. Therefore, at least for these reasons, applicant respectfully requests withdrawal of the corresponding rejections of claim 7 and allowance of the claim.

Claims 8-11, 16, and 18 depend from independent claim 7 that is believed to be in condition for allowance as set forth above. Accordingly, applicant respectfully requests withdrawal of the corresponding rejection of claims 8-11, 16 and 18 as depending directly or indirectly from allowable claim 7.

New claim 19

Independent claim 19 has been added. Claim 19 includes features of claims 1 and 2, which were rejected under 35 U.S.C. § 103(a) to Okawa. Claim 19 states, “wherein said first fixing device includes a plurality of penetrating holes that are interconnected

with one another inside thereof and the second power transmission device is configured to pass into at least one of the plurality of penetrating holes.” Okawa fails to disclose such structure.

The Office action alleges on page 5 that Okawa teaches a fixing device, specifically citing the first projection 5a in Fig. 3 as being equivalent to the claimed “first fixing device.” The Office action concedes that the alleged first fixing device “fails to teach penetrating holes that are interconnected with one another” but states that such structure would have been an obvious design choice. In distinction, however, MPEP 2141(III) states that “[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” Emphasis added. Moreover, “The mere fact that references can be combined or modified does not render the resultant combination obvious unless the results would have been predictable to one of ordinary skill in the art.” See MPEP 2143.01, emphasis added.

In the present case, Okawa discloses a drive belt 10, 31, or 41, having a plurality of holes 31a-31c. Projections 5a, 9a (see Fig. 4B) project outwardly from pulleys to engage holes in the drive belt. As such, the drive belt simultaneously provides synchronization between the two pulleys 5, 9, and also allows for length adjusting of the drive belt. The projection and hole engagement between the pulleys 5, 9, and drive belt is such that “The driven pulley 5 is therefore ensured to be driven to rotate in synchronism with the drive pulley 9 without causing a slip” and “the ultrasonic probe becomes more reliable and accurate.” See Paragraph [0019]. In fact, Okawa expressly states that “It is desirable that the synchronizing means be constituted by a first projection

formed on the driven pulley to radially project from the outer peripheral surface of the driven pulley.” See Paragraph [0016], emphasis added. Accordingly, Okawa already teaches synchronization between the two pulleys due to the projection passing through a hole in the drive belt. Therefore, one of ordinary skill in the art would not be motivated to provide the projections with “penetrating holes,” as alleged in the Office action. Therefore, at least for these reasons, claim 19 is believed to be in condition for allowance.

In light of the foregoing, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in a condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No.: NIHE-40635.

Respectfully submitted,
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